

**PAT-NO:** JP403186815A  
**DOCUMENT-IDENTIFIER:** JP 03186815 A  
**TITLE:** LIQUID CRYSTAL DISPLAY ELEMENT  
  
**PUBN-DATE:** August 14, 1991

**INVENTOR-INFORMATION:**

**NAME** **COUNTRY**  
OKUMURA, OSAMU

**ASSIGNEE-INFORMATION:**

**NAME** **COUNTRY**  
SEIKO EPSON CORP N/A

**APPL-NO:** JP01327609

**APPL-DATE:** December 18, 1989

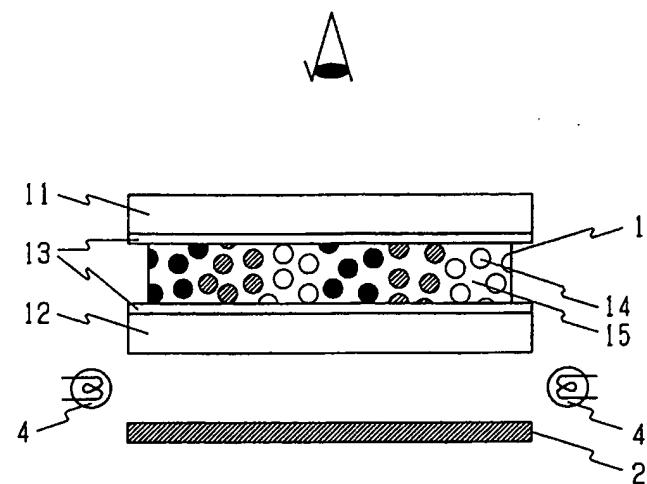
**INT-CL (IPC):** G02F001/1333 , G02F001/1335 , G02F001/137

**US-CL-CURRENT:** 349/165 , 349/201

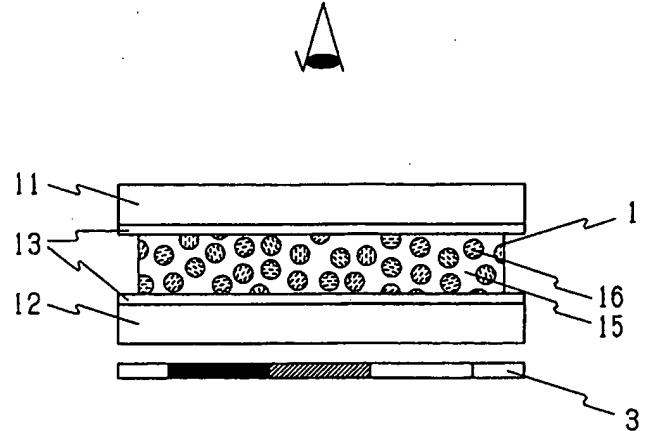
**ABSTRACT:**

**PURPOSE:** To obtain the color high-polymer/liquid crystal composite film (PDLC) of a high contrast by mixing dichromatic dyestuffs with a liquid crystal and placing a light absorber behind the PDLC.

**CONSTITUTION:** The dichromatic dyes are incorporated into the liquid crystal 14 of the PDLC 1 and a light absorber 2 is disposed on the side opposite from an observer with the PDLC 1 in-between. The PDLC 1, therefore, scatters light and the dichromatic dyestuffs simultaneously develop colors when the voltage is not impressed. The colors corresponding to the dyestuffs are consequently brightly visible. On the other hand, both of the PDLC 1 and the dichromatic dyestuffs are transparent when the voltage is impressed and, therefore, the display is blackened by the effect of the light absorber 2 behind the PDLC. The color PDLC display of the high contrast is obtd. in this way.



第 1 図



第 2 図